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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,353	03/23/2004	Shunpei Yamazaki	740756-2721	3995

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EXAMINER	
HARRISON, MONICA D	

ART UNIT	PAPER NUMBER
2829	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/806,353	YAMAZAKI ET AL.	
	Examiner	Art Unit	
	Monica D. Harrison	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-16 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 23 March 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 0804.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Nishi et al (US 2003/0111666 A1).

2. Regarding claim 1, Nishi et al discloses a method for manufacturing a semiconductor device comprising the steps of: forming a first conductive film which serves as a barrier so as to be in contact with an organic insulating film (Figure 12B, reference 647) in which an opening portion is formed (pg. 18, paragraph 0207); forming a second conductive film including aluminum so as to be in contact with the first conductive film (Figure 12B, reference 646); and flattening the second conductive film by selectively performing a heat treatment under reduced pressure or in normal pressure (pg. 18, paragraph 0204).

3. Regarding claim 2, Nishi et al discloses the heat treatment can be sequentially carried out without being exposed to atmosphere (pg. 18, paragraph 0204).

4. Regarding claim 3, Nishi et al discloses irradiation of light from ultraviolet to infrared which use lamp is used as the selective heat treatment (pg. 4, paragraph 0058; pg. 18, paragraph 0202).

5. Regarding claim 4, Nishi et al discloses gas laser irradiation or solid-state laser irradiation which performs pulsed oscillation or continuous oscillation is performed ms the selective heat treatment (pg. 18, paragraph 0202).

6. Regarding claim 5, Nishi et al discloses the organic insulating film includes one kind selected from acryl, polyimide, polyamide, polyimidamide, epoxyacryl, benzocyclobutene, parylene and flare (pg. 9, paragraph 0077).

7. Regarding claim 6, Nishi et al discloses the organic insulating film includes a skeleton structure with a bond of silicon (Si) and oxygen (O) and includes at least hydrogen in the substituent, or a film at least including a kind of a fluorine, an alkyl group, and aromatic hydrocarbon in the substituent (pg.5 thru pg. 9; pg. 18, paragraph 0204).

8. Regarding claim 7, Nishi et al discloses a film including titanium, tantalum, tungsten, or silicon is formed as the first conductive film (pg.18, paragraph 0206).

9. Regarding claim 8, Nishi et al discloses forming a third conductive film over the second conductive film (Figure 12C, reference 657); and forming a film including one kind or plural kinds of element selected from germanium, tin, gallium, zinc, lead, indium, or scandium (pg. 4, paragraph 0056).

10. Regarding claim 9, Nishi et al discloses a method for manufacturing a semiconductor device comprising the steps of: forming a nitride film so as to be in contact with an organic insulating film in which an opening portion is formed (Figure 12A, reference 645);

patterning the nitride film so that an under layer of the organic insulating film is exposed in the opening portion (Figures 12A-12C); forming a first conductive film which serves as a barrier so as to be in contact with the nitride film (Figure 12B, reference 647); forming a second conductive film including aluminum so as to be in contact with the first conductive film (Figure 12B, reference 646); and flattening the second conductive film by selectively performing a heat treatment under reduced pressure or in normal pressure (pg. 18, paragraph 0204 thru 0207).

11. Regarding claim 10, Nishi et al discloses selectively performing the heat treatment can be sequentially carried out without being exposed to atmosphere (pg.18, paragraphs 0202 thru 0204).

12. Regarding claim 11, Nishi et al discloses irradiation of light from ultraviolet to infrared which use lamp is used as the selective heat treatment (pg. 4, paragraph 0058 and pg. 18, paragraph 0202).

13. Regarding claim 12, Nishi et al discloses then, gas laser irradiation or solid-state laser irradiation which performs pulsed oscillation or continuous oscillation is performed as the selective heat treatment (pg. 18, paragraph 0202).

14. Regarding claim 13, Nishi et al discloses the organic insulating film includes one kind selected from acryl, polyimide, polyamide, polyimidamide, epoxyacryl, benzocyclobutene, parylene and flare (pg. 9, paragraph 0077).

15. Regarding claim 14, Nishi et al discloses the organic insulating film includes a skeleton structure with a bond of silicon (Si) and oxygen (O) and includes at least hydrogen in the substituent, or a film at least including a kind of a fluorine, an alkyl group, and aromatic hydrocarbon in the substituent (pg.5 thru pg. 9; pg. 18, paragraph 0204).

16. Regarding claim 15, Nishi et al discloses a film including titanium, tantalum, tungsten, or silicon is formed as the first conductive film (pg. 18, paragraph 0206).

17. Regarding claim 16, Nishi et al discloses forming a third conductive film over the second conductive film (Figure 12C, reference 657); and forming a film including one kind or plural kinds of element selected from germanium, tin, gallium, zinc, lead, indium, or scandium (pg. 4, paragraph 0056).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica D. Harrison whose telephone number is 571-272-1959. The examiner can normally be reached on M-F 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica D. Harrison
AU 2829

mdh
October 26, 2004

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SUPERVISORY PATENT EXAMINER
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